

APPROVED	O.G. FIG.
EY	CLASS/SUBCLASS
DRAFTSMAN	

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1 AAAAAGAAAG GAAGAAAATG GAAATACAAC AAACACACCG CAAAATCAAT  
51 CGCCCTCTGG TTTCTCTCGC TTTAGTAGGA GCATTAGTCA GCATCACACC  
101 GCAACAAAGT CATGCCGCCT TTTTCACAAC CGTGATCATT CCAGCCATTG  
151 TTGGGGGTAT CGCTACAGGC ACCGCTGTAG GAACGGTCTC AGGGCTTCTT  
201 AGCTGGGGGC TCAAACAAGC CGAAGAAGCC AATAAAACCC CAGATAAACC  
251 CGATAAAGTT TGGCGCATT C AAGCAGGAAA AGGCTTTAAT GAATTCCCTA  
301 ACAAGGAATA CGACTTATAC AGATCCCTTT TATCCAGTAA GATTGATGGA  
351 GGTGGGGATT GGGGGAATGC CGCTAGGCAT TATTGGGTCA AAGGCGGGCA  
401 ACAGAATAAG CTTGAAGTGG ATATGAAAGA CGCTGTAGGG ACTTATACCT  
451 TATCAGGGCT TAGAACTTT ACTGGTGGGG ATTTAGATGT CAATATGCAA  
501 AAAGCCACTT TACGCTTGGG CCAATTCAAT GGCAATTCTT TTACAAGCTA  
551 TAAGGATAGT GCTGATCGCA CCACGAGAGT GATTTCAACG CTAAAAATAT  
601 CTCAATTGAT AATTTTGCAG AAATCAACAA CTCGTGTGGG TTCTGGAGCC  
651 GGGAGGAAAG CCAGCTCTAC GGTTTTGA CT TTGCAAGCTT CAGAAGGGAT  
701 CACTAGCGAT AAAAACGCTG AAATTTCTCT TTATGATGGT GCCACGCTCA  
751 ATTTGGCTTC AAGCAGCGTT AAATTAATGG GTAATGTGTG GATGGGCCGT  
801 TTGCAATACG TGGGAGCGTA TTTGGCCCCT TCATACAGCA CGATAAACAC  
851 TTCAAAAGTA ACAGGGGAAG TGAATTTTAA CCACCTCACT GTTGGCGATA  
901 AAAACGCCGC TCAAGCGGGC ATTATCGCTA ATAAAAAGAC TAATATTGGC  
951 AACTGGATT TGTGGCAAAG CGCCGGGTTA AACATTATCG CTCCTCCAGA  
1001 AGGTGGCTAT AAGGATAAAC CCAATAATAC CCCTTCTCAA AGTGGTGCTA  
1051 AAAACGACAA AAATGAAAGC GCTAAAAACG ACAAACAAGA GAGCAGTCAA  
1101 AATAATAGTA AACTCAGGT CATTAAACCA CCCAATAGTG CGCAAAAAAC  
1151 AGAAGTTCAA CCCACGCAAG TCATTGATGG GCCTTTTGCG GGCGGCAAAG  
1201 ACACGGTTGT CAATATCAAC CGCATCAACA CTAACGCTGA TGGCAGGATT  
1251 AGAGTGGGAG GGTTTAAAGC TTCTCTTACC ACCAATGCGG CTCATTTGCA  
1301 TATCGGCAAA GCGGGTGTCA ATCTGTCCAA TCAAGCGAGC GGGCGCTCTC

FIG. 1A

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1351 TTATAGTGGA AAATCTAACT GGAATATCA CCGTTGATGG GCCTTTAAGA  
1401 GTGAATAATC AAGTGGGTGG CTATGCTTTG GCAGGATCAA GCGCGAATTT  
1451 TGAGTTTAAG GCTGGTACGG ATACCAAAAA CGGCACAGCC ACTTTTAATA  
1501 ACGATATTAG TCTGGGAAGA TTTGTGAATT TAAAGGTGGA TGCTCATACA  
1551 GCTAATTTTA AAGGTATTGA TACGGGTAAT GGTGGTTTCA ACACCTTAGA  
1601 TTTTAGTGGC GTTACAGACA AAGTCAATAT CAACAAGCTC ATTACGGCTT  
1651 CCACTAATGT GGCCGTAAA AACTTCAACA TTAATGAATT GATTGTAAAA  
1701 ACCAATGGGA TAAGTGTGGG GGAATATACT CATTTTAGCG AAGATATAGG  
1751 CAGTCAATCG CGCATCAATA CCGTGCGTTT GGAAACTGGC ACTAGGTCAC  
1801 TTTTCTCTGG GGGTGTTAAA TTAAAGGTG GCGAAAAATT GGTTATAGAT  
1851 GAGTTTTACT ATAGCCCTTG GAATTATTTT GACGCTAGAA ATATTAATAA  
1901 TGTTGAAATC ACCAATAAAC TTGCTTTTGG ACCTCAAGGA AGTCCTTGGG  
1951 GCACATCAAA ACTTATGTTC AATAATCTAA CCCTAGGTCA AAATGCGGTC  
2001 ATGGATTATA GCCAATTTTT AAATTTAACC ATTCAAGGGG ATTTTCATCA  
2051 CAATCAAGGC ACTATCAACT ATCTGGTCCG AGGTGGGAAA GTGGCAACCT  
2101 TAAGCGTAGG CAATGCAGCA GCTATGATGT TTAATAATGA TATAGACAGC  
2151 GCGACCGGAT TTTACAAACC GTCATCAAG ATTAACAGCG CTCAAGATCT  
2201 CATTAAAAAT ACAGAACATG TTTTATTGAA AGCGAAAATC ATTGGTTATG  
2251 GTAATGTTTC TACAGGTACC AATGGCATTG GTAATGTTAA TCTAGAAGAG  
2301 CAATTCAAAG AGCGCCTAGC CCTTTATAAC AACAATAACC GCATGGATAC  
2351 TTGTGTGGTG CGAAATACTG ATGACATTAA AGCATGCGGT ATGGCTATCG  
2401 GCGATCAAAG CATGGTGAAC AACCTGACA ATTACAAGTA TCTTATCGGT  
2451 AAGGCATGGA AAAATATAGG GATCAGCAAA ACAGCTAATG GCTCTAAAA  
2501 TTCGGTGTAT TATTTAGGCA ATTCTACGCC TACTGAGAAT GGTGGCAATA  
2551 CCACAAATTT ACCCACAAC ACCACTAGCA ATGCACGTTC TGCCAACAAC  
2601 GCCCTTGCAC AAAACGCTCC TTTGCTCAA CCTAGTGCTA CTCCTAATTT  
2651 AGTCGCTATC AATCAGCATG ATTTTGGCAC TATTGAAAGC GTGTTTGAAT

FIG. 1B

APPROVED	D.G. FIG.	
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2701 TGGCTAACCG CTCTAAAGAT ATTGACACGC TTTATGCTAA CTCAGGCGCT  
 2751 CAAGGCAGGG ATCTCTTACA AACCTTATTG ATTGATAGCC ATGATGCGGG  
 2801 TTATGCCAGA AAAATGATTG ATGCTACAAG CGCTAATGAA ATCACCAAGC  
 2851 AATTGAATAC GGCCACTACC ACTTTAAACA ACATAGCCAG TTTAGAGCAT  
 2901 AAAACCAGCG GCTTACAAAC TTTGAGCTTG AGTAATGCGA TGATTTTAAA  
 2951 TTCTCGTTTA GTCAATCTCT CCAGGAGACA CACCAACCAT ATTGACTCGT  
 3001 TCGCCAAACG CTTACAAGCT TTAAGAGACC AAAAATTCGC TTCTTTAGAA  
 3051 AGCGCGGCAG AAGTGTTGTA TCAATTTGCC CCTAAATATG AAAACCTAC  
 3101 CAATGTTTGG GCTAACGCTA TTGGGGGAAC GAGCTTGAAT AATGGCTCTA  
 3151 ACGCTTCATT GTATGGCACA AGCGCGGGCG TAGACGCTTA CCTTAACGGG  
 3201 CAAGTGGAAG CCATTGTGGG CGGTTTTGGA AGCTATGGTT ATAGCTCTTT  
 3251 TAATAATCGT GCGAACTCCC TTAAGTCTGG GGCCAATAAC ACTAATTTTG  
 3301 GCGTGTATAG CCGTATTTTA ACCAACCAGC ATGAATTTGA CTTTGAAGCT  
 3351 CAAGGGGCAC TAGGGAGCGA TCAATCAAGC TTGAATTTCA AAAGCGCTCT  
 3401 ATTACAAGAT TTGAATCAAA GCTATCATT CTTAGCCTAT AGCGCTGCAA  
 3451 CAAGAGCGAG CTATGGTTAT GACTTCGCGT TTTTATAGGAA CGCTTTAGTG  
 3501 TTAAGACCAA GCGTGGGTGT GAGCTATAAC CATTTAGGTT CAACCAACTT  
 3551 TAAAGCAAC AGCACCAATC AAGTGGCTTT GAAAAATGGC TCTAGCAGTC  
 3601 AGCATTTATT CAACGCTAGC GCTAATGTGG AAGCGCGCTA TTATTATGGG  
 3651 GACACTTCAT ACTTCTACAT GAATGCTGGA GTTTTACAAG AGTTCGCTCA  
 3701 TGTTGGCTCT AATAACGCCG CGTCTTTAAA CACCTTTAAA GTGAATGCCG  
 3751 CTCGCAACCC TTAAATACC CATGCCAGAG TGATGATGGG TGGGGAATTA  
 3801 AAATTAGCTA AAGAAGTGTT TTTGAATTTG GGC GTTGT TTTGACACAA  
 3851 TTTGATTTCC AATATAGGCC ATTCGCTTC CAATTTAGGA ATGAGGTATA  
 3901 GTTCTAAAT ACCGCTCTTA AACCCATGCT CAAAGCATGG GTTTGAAATC  
 3951 TTACAAAACA

FIG. 1C

ERSATZRI ATT

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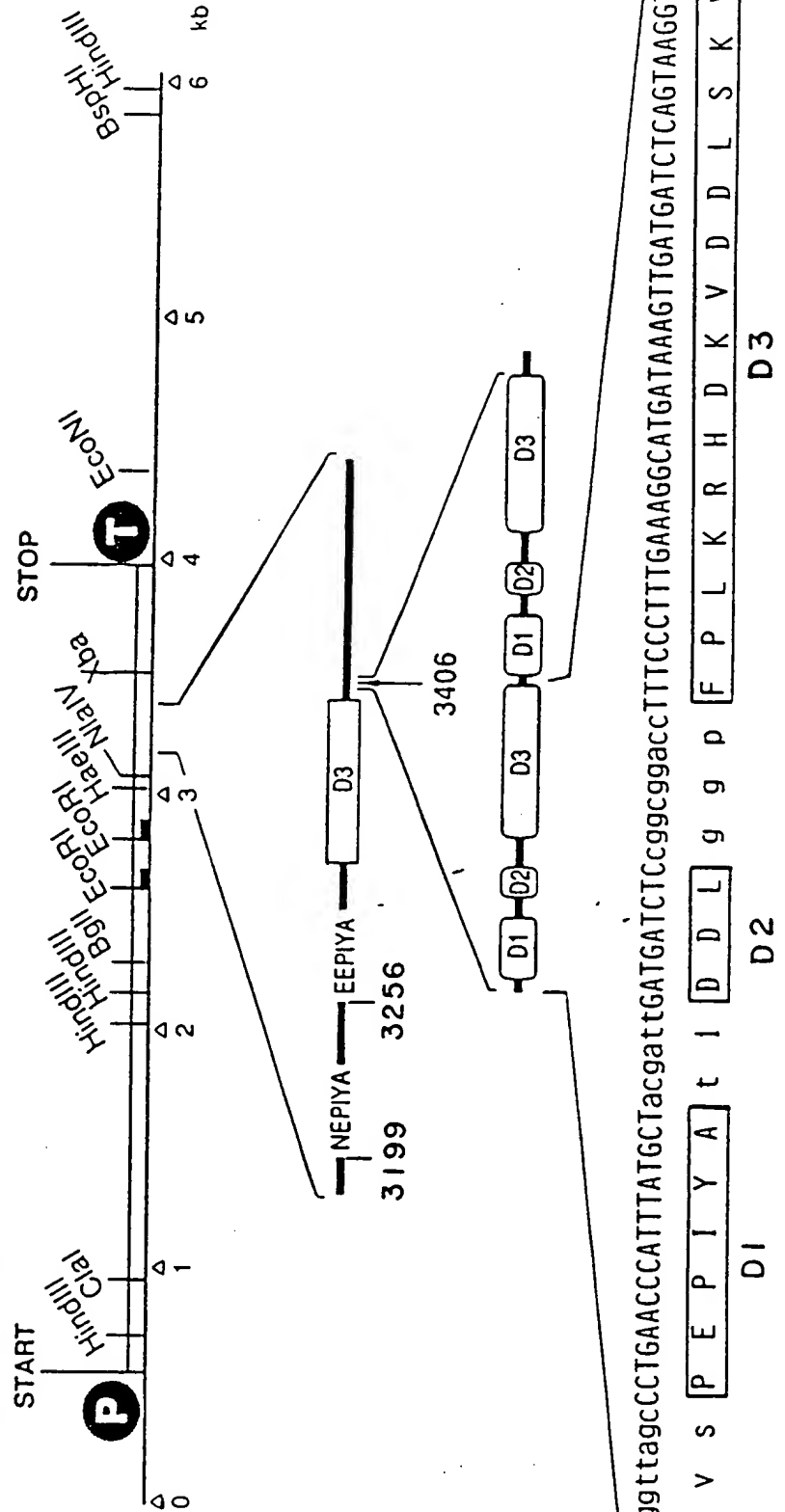
1 MEIQQTHRKI NRPLVSLALV GALVSITPQQ SHAAFFTTVI IPAIVGGIAT  
 51 GTAVGTVSGL LSWGLKQAE E ANKTPDKPDK VWRIQAGKGF NEFPNKEYDL  
 101 YRLLSSKID GGWDWGNAAR HYWVKGGQQN KLEVDMKDAV GTYTL SGLRN  
 151 FTGGDLVNM QKATLRLGQF NGNSFTSYKD SADRTTRVIS TLKISQLIIL  
 201 QKSTTRVGS G AGRKASSTVL TLQASEGITS DKNAEISLYD GATLNLASSS  
 251 VKLMGNVWMG RLQYVGAYLA PSYSTINTSK VTGEVNFNHL TVGDKNAAQA  
 301 GIIANKKTN I GTLDLWQSAG LNIIAPPEGG YKDKPNNTPS QSGAKNDKNE  
 351 SAKNDKQESS QNNSNTQVIN PPNSAQKTEV OPTQVIDGPF AGGKDTVVNI  
 401 NRINTNADGT IRVGGFKASL TTNA AHLHIG KGGVNL SNQA SGRSLIVENL  
 451 TGNITVDGPL RVNNQVGGYA LAGSSANFEF KAGTDTKNGT ATFNNDISLG  
 501 RFVNLKVDAH TANFKGIDTG NGGFNTLDFS GVTDKVNINK LITASTNVAV  
 551 KNFNINELIV KTNGISVGEY THFSEDIGSQ SRINTVRLET GTRSLFSGGV  
 601 KFKGGEKLV I DEFYYSPWNY FDARNIKNVE ITNKLA FGPO GSPWGTSKLM  
 651 FNNLT LGQNA VMDYSQFLNL TIQGDFINNG GTINYLV RGG KVATLSVGNA  
 701 AAMMFNNDID SATGFYKPLI KINSAQDLIK NTEHVLLKAK IIGYGNVSTG  
 751 TNGISNVNLE EQFKERLALY NNNNRMDTCV VRNTDDIKAC GMAIGDQSMV  
 801 NNPDNYKYLI GKAWKNIGIS KTANGSKISV YYLGNSTPTE NGGNTTNLPT  
 851 NTTSNARSAN NALAQNAPFA QPSATPNLVA INQHDFGTIE SVFELANRSK  
 901 DIDTLYANS G AQGRDLLQTL LIDSHDAGYA RKMIDATSAN EITKQLNTAT  
 951 TTLNNIASLE HKTSGLQTLS LSNAMILNSR LVNLSRRHTN HIDSFAKRLQ  
 1001 ALKDQKFASL ESAAEVLYQF APKYEKPTNV WANAIGGTSL NNGSNASLYG  
 1051 TSAGVDAYLN GQVEAIVGGF GSYGYSSFNN RANSLNSGAN NTNFGVYSRI  
 1101 LTNQHEFD FE AQGALGSDQS SLNFKSALLQ DLNQSYHYLA YSAATRASYG  
 1151 YDFAFFRNAL VLKPSVGVS Y NHLGSTNFKS NSTNQVALKN GSSSQHLFNA  
 1201 SANVEARYYY GDTSYFYMNA GVLQEFAHVG SNNAASLNTF KVNAARNPLN  
 1251 THARVMMGGE LKLAKEVFLN LGVVYLHNLI SNIGHFASN L GMRYSF

FIG. 2

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**FIG. 3**  
 2248 BI 5925  
 2641 AI 3466  
 857 64/4 1647 2141 24 2640 2776 G5 3466  
 I 57/D 1294 1533 007 2289 2776 AI7 3466



CTCCATTTAAGCACTCCATAGACCACCTAAAGAACTTTTTTTGAGGCTAICITTTGAAA  
GCTTAATTATACATGCTATAGTAAGCATGACACACAAACCAACTATTTTTAGACGGCTT  
TCAAAAGATTTCATTTCTTATTTCTTCTTATTAAGTTCTTTTCATTTAGCAATTT  
CTTTTTCAATTAATTAATGATTAAATGAAAAAAATGCTTGATTTGTTGAT  
TTGACACTAACAGATACCGATAGGTATGAACCTAGGTATAGTAAAGGAACAACTGACT  
M T  
AATAATCTTCAAGTAGCTTTTCTTAAAGTTGATAACGCTGCTGCTTCATACGATCCTGAT  
23 N N L Q V A F L K V D N A V A S Y D P D  
CAATTAAGGAAGATCTCAATAAGCGATCAAAATCTTACCAAAAGAAATCAGTAT  
63 Q L R E Y S N K A I K N P T K K N Q Y  
GAATCTTCCAAAGAGCTTTCAGAAATTTGGGATCAGCGTTACCGAATTTTCACAGT  
103 E S S T K S F Q K F G D Q R Y R I F T S  
GAAATATCATACACCCCTATCTTGTATGATAAGAGAAAGCGGAGTTTTTGAATCT  
143 E N I I Q P P I L D K E K A E F L K S  
ATGGCGTGTGTGATGAGTCTTGAAGAGAGGCAAGAGCAGAAATAATGGAGAGCT  
183 M G V F D E S L K E R Q E A E K N G E P  
GATGCAAAAGCAATCAATCAAGAACCGATTCCTCCATGTCACCAACCATATAGCCACT  
223 D V K E A I N Q E P V P H V Q P D I A T  
AATTTTCTAAATTCACCTCTGGCGATATGGAATGTTAGATGTTGAGGAGTCGCTGAC  
263 N F S K F T L G D M E M L D V E G V A D  
TTAATGGGGAGTCATAATGGCATAGACCTGAAAGATTTTCATTTGTTGATGGGGCAAT  
303 L M G S H N G I E P E K V S L L Y G G N  
AACAAATGGGTACATAATTAATGTGCATATGAAAAACGGCAGTGGCTTAGTCATAGCA  
343 N N V A T I I N V H M K N G S G L V I A  
GGCTCACACGAGCATTAAAGTCAAGAGAGATCCAAACAAATAGATTTCATGGAATTT  
383 G S Q R A L S Q E E I Q N K I D F M E F  
ACTGAGATTAAAGATTTCCAAAAGACTCTAAGGCTTATTAGACGCCCTAGGGAATGAT  
423 T E I K D F Q K D S K A Y L D A L G N D  
AATGGGATTTGAGCTACACTCTCAAGATTATGGGAAAAAGCAGATAAGCTTTAGAT  
463 N G D L S Y T L K D Y G K K A D K A L D  
TATTCTAATTTCAATACACCAACGCTCCCAAGATCCCAATAAGGGTGTAGGGCTAGC

ATCTGCTCTATTGATTGTTTCCATTTGTTTCCCATGCTGGATCTTGTGGATCACAAC 120  
CATGTGCTACCTTGACTTAACCTTCTCCCAACATACITTTASCGTTGCAATTGATTTCT 240  
TTGTTAATTTGGTAAATGTAATCGCTCTAGCCTTAGACGCCCTGCAAGATCGGG 360  
AATGAGATGTTCAAGAGATGAATGACTACTCAAGCGTGTAGGATTTTGTAGCAGTCT 480  
AACGAAACCATTTGACCAACCAACCAACCGAAGCGCTTTAACCCCGCAATTTATC 600  
N E T I D Q Q P Q T E A A F N P Q Q F I  
CAAAACCAATCGTTGATAAGACGATAGGATAACAGGCAAGCTTTTGAAGATCTCG 720  
Q K P I V D K N D R D N R Q A F E G I S  
TTTTCAGACTTTTATCAATAAGAGCAATGATTTAATCAACAAAGACAATCTCATTTGATGA 840  
F S D F I N K S N D L I N K D N L I D V  
TGGTGTCCCATCAAAACGATCGCTCTAAATCAACACCCGATCGATCCGAAATTTTATG 960  
W V S H Q N D P S K I N T R S I R N F M  
GCCAAACATCTTTTGCAGGATCATTATAGGGAATCAATCCGACCGATCAAAAGTTC 1080  
A K Q S F A G I I I G N Q I R T D Q K F  
ACTGTGGGATTTGGTGGATTTTCTCTCATTTATATTTGACAAAAACAATCTCT 1200  
T G G D W L D I F L S F I F D K K Q S S  
ACCACCCGACATACAGGCTTACCGCTGAGCTAGAGATTTACTTGATGAAGGGGT 1320  
T T T D I Q G L P P E A R D L L D E R G  
ATTGATCCCAATTAACAGTTCAATCAATTTATTGATTCACAATACGCTCTGCTCTGTG 1440  
I D P N Y K F N Q L L I H N N A L S S V  
GGTGTCTGGAGCTAGGATGATTGGAGCCCGCTGGTTGTTATTAAGACCAACCAAGGC 1560  
G G P G A R H D W N A T V G Y K D Q G  
GGTGTGAGAAAGGATTACAAACCTAGTTTCTCTACAAAGAGACCAACTCACA 1680  
G G E K G I N M P S F Y L Y K E D Q L T  
CTTGACAAATAATGCTAATTAAGACAACTTGAGCGAGAAAGAGAAATAATCCGA 1800  
L A Q N N A K L D N L S E K E K E K F R  
CGTATTGCTTTTGTCTTAAAGACACAAACATTCAGCTTTAATTACTGAGTTGGT 1920  
R I A F V S K K D T K H S A L I T E F G  
AGGAGAAATGTTACTCTTCAAGTAGCTTAAACATGATGGCGTGTGTTGTTGAT 2040  
R E K N V T L Q G S L K H D G V M F V D  
AATGGGCTTTCCCATTTAGAGTAGGCTTTAACAAGTAGCTATCTTTAATTGCTGAT 2160

FIG. 4B

ERSATZBLATT

FIG. 4A

ERSATZBLATT

503 Y S N F K Y T N A S K N P N K G V G V T  
TTAATAATCTCGCTACTACTAGTTCTGTAAGCGGAATTTAGAGGATAAACTAACCACT  
543 L N N L A I T S F V R R N L E D K L T T  
GAATTGGTTGAAAAACCTTAACCTTCAATAAAGCTGTAGCTGACGCTAARAAACACAGGC  
583 E L V G K T L N F N K A V A D A K N T G  
CATTTAGAGAAAGAGTAGAGAAAAATTGGAGACAAAGCGGCACAAAAATAAATG  
623 H L E K E V E K K L E S K S G N K N K M  
GCTAATAGAGACGCAAGAGCAATCGCTTACGCTCAGAACTTTAAAGGCATCAAAAGGGAA  
663 A N R D A R A I A Y A Q N L K G I K R E  
GAATTCAAAATGGCAAAATAAGGATTTCCAGCAAGGCAGAGAAACACTAAAGGCCCTT  
703 E F K N G K N K D F S K A E E T L K A L  
AATGCAGCTTTGAATGAATCAAAAAATGGCAAAATAAGGATTTTCAGCAAGSTAAGCGAA  
743 N A A L N E F K N G K N K D F S K V T Q  
AAGTTGATAATCTCAATCARGCGGTATCAGTGCGTARAGCAACGGGTGATTTTCAGTAGG  
783 K V D N L N Q A V S V A K A T G D F S R  
CAAAAAATGAAGTCTCAATGCTAGAAAAAATCTGAATATATCAATCGTGAAGAT  
823 Q K N E S L N A R K K S E I Y Q S V K N  
AAAAACTTTTCGACATCAAGAAAGATTGAATGCAAAACTTGGAAATTTCAATAACAAT  
863 K N F S D I K K E L N A K L G N F N N N  
CAAGCAGTAGCTTGAAGAACCCATTACGCTCAAGTGTCTAAAAGGTAAATGCAAAA  
903 Q A A S L E E P I Y A Q V A K K V N A K  
CCTTTGAAAAGGCATGATAAAGTTGATGATCTCAGTAAGGTAGGCGCTTTCAGGAAGTAA  
943 P L K R H D K V D D L S K V G L S R N Q  
TTTGGCAATCTAGAGCAACGATAGACAAGCTCAAGATTCTACAAAAACAATCCCATG  
9983 F G N L E Q T I D K L K D S T K H N P M  
TAGGCTACTARAGGCCACATACGCATTAAATAGCAATATCAAAATGGAGCAATCAATGAA

**FIG. 4C**

ERSATZBLATT

N G V S H L E V G F N K V A I F N L P D	
AAGGATTGTCCCCACAAGAAGCTAATAAGCTTATCAAGATTTTTTTGAGCAGCAACAA	2280
K G L S P Q E A N K L I K D F L S S N K	
AATTATGATGAAGTGAAAAAGCTCAGAAAGATCTTGAAAATCTCTAAGGAACGAGAG	2400
N Y D E V K K A Q K D L E K S L R K R E	
GAAGCAAAGCTCAAGCTAACAGCCAAAAGATGAGATTTTTGCGTTGATCAATAAGAG	2520
E A K A Q A N S Q K D E I F A L I N K E	
TGTCGTATAACTTGAAATGTCAACAGAATTTGAAAGACTTTGATAAATCTTTTGAT	2640
L S D K L E N V N K N L K D F D K S F D	
AAAGGTCGGTGAAAGATTTAGGTATCAATCCAGATGGATTTCAAAAGTTGAAACCTT	2760
K G S V K D L G I N P E W I S K V E N L	
GCAAAAAGCGACCTTGAAATTCGGTTAAGATGTATCATCAATCAAAAGGTAAACGGAT	2880
A K S D L E N S V K D V I I N Q K V T D	
GTAGACGAAGCGTTAGCGGATCTCAAAAATTTCTCAAAGGAGCAATTTGGCCCCAACACCT	3000
V E Q A L A D L K N F S K E Q L A Q Q A	
GGTGTGAATGGAACCCTAGTCGGTAATGGGTATCTCAAGCAGGCCAACACTTTCTCT	3120
G V N G T L V G N G L S Q A E A T T L S	
AACATAATGGACTCAAAAACGAACCCATTTATGCTAAGTTAATAAAGANAAGCAGGG	3240
N N N G L K N <u>E P I Y A</u> K V N K K K A G	
ATTGACCGACTCAATCAATAGCAAGTGGTTGGGTGTGTAGGCACGACGCGGGCTTC	3360
I D R L N Q I A S G L G V V G Q A A G <u>F</u>	
GAATTGGCTCAGAAAATTGACAAATCTCAATCAAGCGGTATCAGAGCTAAGACAGGTTTT	3480
E L A Q K I D N L N Q A V S E A K A G F	
AATCTATGGTTGAAAGTGCAAAAAGTACCCTGCTAGTTTGTACGCGAAACTAGACAAAT	3600
N L W V E S A K K V P A S L S A K L D N	
AAAGCGACGGCATGCTAACCGCAAAAACCCCTGAGTGGCTCAAGCTCGTGAAATGATAAG	3720

**FIG. 4D**

**ERSATZBLATT**

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1023 Y A T N S H I R I N S N I K N G A I N  
 ATAGTTGCGCATATGATGAAGCGTTCTTTGTGACAGATGATATAAATTGGCTTC  
 1063 I V A H N V G S V P L S E Y D K I G F  
 GTAAAGACACTAATCTGCGCTTTACGCAATTTTAAACCAATGCATTTTCTACAGCA  
 1103 V K D T N S G F T Q F L T N A F S T A  
 GGTTCCAAATCTTAAAGGATTAAAGGATACCAAAACGCAAAACCCCTTG  
 1143 G F Q K S  
 TGAATGCTACCAATTCATGATATATCCCATACATTCGTATCTAGCTAGGAAG  
 AACTCTGTAATCCCTATTATAGGGACACAGATGAGAACCAACTCTCCCTACGG  
 GACAGACACTAACGAAGGCTTTGTCTTTAAAGTCTGCATGGATATTTCTACCCC  
 CGAAATTAATTAGGGTTAAGAGAGCATAACTAGAAAAACAAGTAGCTATA  
 GAAATCAGAAAAACCATAGGAATTATCACACCTTATATGCCCCAAAGACGCT  
 ATGCCCTTCAAGGTGAGAGGAGATATTATTATTATCCACCGTGAAACTTTGTG  
 ATCTCATTTTGTGGTAAAGCTTTCTTTGAGAAATTTATGAGCGATTATAATCAACAC  
 CATCTCGCTTCAACACGCTTTTATATAATCTCTTAAAGCGCTTATAATCAACAC  
 TTATTAGCGTTACAATTTGAGCATTCTTTAGCTGTTTTTCTAGCCAGATCACATC  
 CTGCAATATCTACATAGCATCGCCGAATGGATGAGTAGGGGGGTGTTGAAAG  
 TAAATAATCACTTCGGGAAATCTTTAAGGGAGTGAATAATAACGCATGCAAGTT  
 TCGGAAACATTCAATAGCCTTGTGTTTCAGGGCATTGTGATAGCGTTGATTTGG  
 GCTAAAATGCTTGGCTCAATACGCCCAATAGGGATTTTGGAAATGCTTTTGATC  
 TTGAAAAATCCAAAGCTCTAAGCCAAATGCTTGTGATCGTAGTGGGGCTTTTAGTG  
 AGGCTTTTAAACGCTAAACCTCCACACCGCTATCAAAACGCTATTTTTCATG  
 TCTTCATTGCTTAGTTGTTGCTTTTGAATAGAACAAAGCTT 5925

FIG. 4E

ERSATZBLATT

E K A T G M L T O K N P E W L K L V N D K  
 AACCAAGAATGAAGATTATTCGATTGTTCAAGTTTCCACCAAGTTGAACATGCT  
 3840 N O K N M K D Y S D S F K F S T K L N N A  
 TCTTATTACTGCTGGCGAGAGAAATCGGAGCATGGAATCAAGAAGCTTAAATACAAAGGT  
 3960 S Y Y C L A R E N A E H G I K N V N T K G  
 CTAAAGCGAGGGTTTTTAATACTCTTAGCAGAAATCCCAATCGCTTTAGTATTGGGA  
 4080  
 TGTGCAAGTTACGCTTTTGGAGATATGATGTGAGACCTGTAGGAAATGCGTTGGAGCTCA  
 4200 GCAACATCAGCCTTAGGAAGCCCAATCGCTTTAGCGGTTGGCACCTTCACTTAAATATCCC  
 4320 AAAAAGACTTAACCTTTGCTTAAATTAAGTTTGAATGCTAGTGGGTTGCTGTATAGTG  
 4440 ACAAGATCAAGTTCAAAAATCATAGAGCTTTTAGAGCAATTTGATCGGCTCTTAACCCAA  
 4560 TCGATCAGAAAGTGGAATAACGCTTCAAGAAATTTGATGAGCTCAAAATAGACACTGTGG  
 4680 GTAATCTTCTTTCTGCTAGATTCTAACGCTTGAATGTGGCTATTTCTAGGGCAAAAGAAA  
 4800 ATATCTTTAGCGCTATTTTGAAGTCTGTAGATAGTAATCTTTCCAAAGATAATCATTAGA  
 4920 AATACCTTATAGTGTAGCTATAGCCCTTTTGGGAAATGAGTATTTTACCTTTAAATTT  
 5040 GCGCTCGCATGAATTCACCTTTAGGGAATGCGTGTGCTTTTTTAAAGGCGTATTTTGG  
 5160 GCAAAATGCTCCATAAATAGCCCTCAATTTTGAAGCGATTAGGGAATGCGTGCAACC  
 5280 TCTAACAAATCGCCCTCTAAAATACTTTCTTCAATCAAGGCACAAAAGAGAGTGGCTAAA  
 5400 ATCGTCGCTTTTGTCCCTAGCACATAAATAGGGGCTTTTTTATCTTTTACTTGTGCTGATC  
 5520 TCTTCTAAGCTAGAGCGCTGCTGTGTGTCATGCCACAATCAATTAATCAATCTGCTGCGGT  
 5640 CCATAAGGCACCTAGCGGTATCGCCATATAGATGATTTCATCAATAATTCGCTTTTAA  
 5760 ACACTTTTTAAATTAATGAGGATTAAATAGGGAATTTTATTTTTCATTCATTAAAGTTTAAAT  
 5880

FIG. 4F

ERSATZBLATT



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10 30 50  
AAGCTTGCTGTCATGATCACAAAAACACTAAAAACATTATTATTAAGGATACAAAATG M  
70 90 110  
GCAAAAGAAATCAAATTTTCAGATAGTGCGAGAAACCTTTTATTTGAAGGCGTGAGGCAA  
A K E I K F S D S A R N L L F E G V R Q  
130 150 170  
CTCCATGACGCTGTCAAAGTAACCATGGGGCCAAGAGGCAGGAATGTATTGATCCAAAAA  
L H D A V K V T M G P R G R N V L I Q K  
190 210 230  
AGCTATGGCGCTCCAAGCATCACCAAGACGGCGTGAGCGTGGCTAAAGAGATTGAATTA  
S Y G A P S I T K D G V S V A K E I E L  
250 270 290  
AGTTGCCAGTAGCTAACATGGGGCGCTCAACTCGTTAAAGAAGTAGCGAGCAAACCGCT  
S C P V A N M G A Q L V K E V A S K T A  
310 330 350  
GATGCTGCCGGCGATGGCACGACCACAGCGACCGTGCTAGCTTATAGCATTTTTAAAGAA  
D A A G D G T T T A T V L A Y S I F K E  
370 390 410  
GGTTTGAGGAATATCACGGCTGGGGCTAACCTATTGAAGTGAAACGAGGCATGGATAAA  
G L R N I T A G A N P I E V K R G M D K  
430 450 470  
GCTGCTGAAGCGATCATTAAATGAGCTTAAAAAGCGAGCAAAAAAGTAGGCGGTAAAGAA  
A A E A I I N E L K K A S K K V G G K E  
490 510 530  
GAAATCACCCAAGTGGCGACCATTTCTGCAAACTCCGATCACAATATCGGGAAACTCATC  
E I T Q V A T I S A N S D H N I G K L I  
550 570 590  
GCTGACGCTATGGAAAAAGTGGGTAAAGACGGCGTGATCACCGTTGAGGAAGCTAAGGGC  
A D A M E K V G K D G V I T V E E A K G  
610 630 650  
ATTGAAGATGAATTGGATGTCGTAGAAGGCATGCAATTTGATAGAGGCTACCTCTCCCT  
I E D E L D V V E G M Q F D R G Y L S P

FIG. 5A

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670 690 710  
TATTTTGTAAACGAACGCTGAGAAAATGACCGCTCAATTGGATAATGCTTACATCCTTTTA  
Y F V T N A E K M T A Q L D N A Y I L L  
730 750 770  
ACGGATAAAAAAATCTCTAGCATGAAAGACATTCTCCCGCTACTAGAAAAAACCATGAAA  
T D K K I S S M K D I L P L L E K T M K

790 810 HindIII  
GAGGGCAAACCGCTTTTAATCATCGCTGAAGACATTGAGGGCGAAGCTTTAACGACTCTA  
E G K P L L I I A E D I E G E A L T T L  
850 870 890  
GTGGTGAATAAATTAAGAGGCGTGTGAATATCGCAGCGGTTAAAGCTCCAGGCTTTGGG  
V V N K L R G V L N I A A V K A P G F G  
910 930 950  
GACAGAAGAAAAGAAATGCTCAAAGACATCGCTATTTTAACCGGCGGTCAAGTCATTAGC  
D R R K E M L K D I A I L T G G Q V I S  
970 990 1010  
GAAGAATTGGGCTTGAGTCTAGAAAACGCTGAAGTGGAGTTTTTAGGCAAAGCTGGAAGG  
E E L G L S L E N A E V E F L G K A G R  
1030 1050 1070  
ATTGTGATTGACAAAGACAACACACGATCGTAGATGGCAAAGGCCATAGCGATGATGTT  
I V I D K D N T T I V D G K G H S D D V  
1090 1110 1130  
AAAGACAGAGTCGCGCAGATCAAAACCCAAATTGCAAGTACGACAAGCGATTATGACAAA  
K D R V A Q I K T Q I A S T T S D Y D K  
1150 1170 1190  
GAAAAATTGCAAGAAAGATTGGCTAAACTCTCTGGCGGTGTGGCTGTGATTAAAGTGGGC  
E K L Q E R L A K L S G G V A V I K V G  
1210 1230 1250  
GCTGCGAGTGAAGTGGAAATGAAAGAGAAAAAAGACCGGGTGGATGACGCGTTGAGCGCG  
A A S E V E M K E K K D R V D D A L S A  
1270 1290 1310  
ACTAAAGCGGCGGTTGAAGAAGGCATTGTGATTGGTGGCGGTGCGGCTCTCATTGCGCGG  
T K A A V E E G I V I G G G A A L I R A

FIG. 5B

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1330 1350 1370  
GCTCAAAAAGTGCATTTGAATTTGCACGATGATGAAAAAGTGGGCTATGAAATCATCATG  
A Q K V H L N L H D D E K V G Y E I I M  
1390 1410 1430  
CGCGCCATTAAAGCCCCATTAGCTCAAATCGCTATCAACGCTGGTTATGATGGCGGTGTG  
R A I K A P L A Q I A I N A G Y D G G V  
1450 1470 1490  
GTCGTGAATGAAGTAGAAAAACACGAAGGGCATTGTTTAAACGCTAGCAATGGCAAG  
V V N E V E K H E G H F G F N A S N G K  
1510 1530 1550  
TATGTGGATATGTTTAAAGAAGGCATTATTGACCCCTTAAAGTAGAAAGGATCGCTCTA  
Y V D M F K E G I I D P L K V E R I A L  
1570 1590 1610  
CAAAATGCGGTTTCGGTTTCAAGCCTGCTTTTAACCACAGAAGCCACCGTGCATGAAATC  
Q N A V S V S S L L L T T E A T V H E I  
1630 1650 1670  
AAAGAAGAAAAAGCGACTCCGGCAATGCCTGATATGGGTGGCATGGGCGGTATGGGAGGC  
K E E K A T P A M P D M G G M G G M G G  
1690 1710 1730  
ATGGGCGGCATGATGTAAGCCCGCTTGCTTTTTAGTATAATCTGCTTTTAAATCCCTTC  
M G G M M \*  
1750 1770 1790  
TCTAAATCCCCCCTTTCTAAATCTCTTTTTGGGGGGGTGCTTTGATAAAACCGCTCG  
1810 1830  
CTTGTA AAAACATGCAACAAAAATCTCTGTTAAGCTT

FIG. 5C